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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
GRAYSAY, TAMARA L	

ART UNIT	PAPER NUMBER
3623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

JB

Office Action Summary	**Application No.** 10/682,588	**Applicant(s)** SENGIR ET AL.	
	Examiner Tamara L. Graysay	**Art Unit** 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-41 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-41 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 09 October 2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4 pages.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. Some information listed on the Information Disclosure Statement(s) has been lined through because it is duplicative.

Drawings

2. The drawings are objected to

a. as failing to comply with 37 CFR 1.84(l) because every line in FIG.1 is not sufficiently dense and dark, and uniformly thick and well-defined;

b. as failing to comply with 37 CFR 1.84(p)(5) because FIG.1 contains what appear to be individual reference characters that are not mentioned in the specification; and,

c. as failing to comply with 37 CFR 1.84(u)(1) because FIG.1 contains four different views (four stages) which are not numbered separately.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. In the present application the inventions are methods of modeling and developing a model for collaborative relationships, not a system and model.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claim 11 is objected to because of the following informalities: for consistency, the phrase, "connectivity of social" should be inserted at line 1 after the term "said." Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In order for a process claim to be statutory, it must produce a practical application within the technological arts.

Claims 1-16

Practical application: A practical application is a useful, concrete, and tangible result. In the present application, the invention of claims 1-16 produces an "output value" corresponding to a condition. The "output value" is not a useful, concrete, and tangible result insofar as the "output value" is just that, a value. The value may have some usefulness but as recited in the claimed invention, the claimed value is not associated with any usefulness. The value as claimed, however, is not a tangible result. It is merely a determination of an "output value" rather than an actual result.

Technological Arts: The claimed invention must be within the technological arts. Mere ideas in the abstract that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" and therefore are found to be nonstatutory subject matter. The process claim must somehow apply, involve, use, or advance the technological arts. In the present application, the invention of claims 1-16 is devoid of any technology. The recited steps do not apply, involve, use, or advance the technological arts, but rather are an abstract idea that can be performed in the mind of one performing the method, or by use of pencil and paper. The steps constitute an abstract idea of how to model a relationship, rather than modeling by applying, involving, using, or advancing the technological arts.

In conclusion, claims 1-16 do not produce a useful, concrete, and tangible result and do not apply, involve, use, or advance technology, thus they are directed to nonstatutory subject matter.

Claims 17-31

Practical application: A practical application is a useful, concrete, and tangible result. In the present application, the invention of claims 17-31 determines both an output value and a condition. The "output value" is not a useful, concrete, and tangible result, as discussed with respect to claims 1-16 above. The "condition of the collaborative relationship" is not a result, but rather a term used to describe or classify the collaborative relationship data. Although the description of the data may be useful in some respect, is not a concrete and tangible result.

Technological Arts: The claimed invention must be within the technological arts. Mere ideas in the abstract that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" and therefore are found to be nonstatutory subject matter. The process claim must somehow apply, involve, use, or advance the technological arts. In the present application, the invention of claims 17-31 is devoid of any technology. The recited steps do not apply, involve, use, or advance the technological arts, but rather are an abstract idea that can be performed in the mind of one performing the method, or by use of pencil and paper. The steps constitute an abstract idea of how to model a relationship, rather than modeling by applying, involving, using, or advancing the technological arts.

In conclusion, claims 17-31 do not produce a useful, concrete, and tangible result and do not apply, involve, use, or advance technology, thus they are directed to nonstatutory subject matter.

Claims 32-37

Practical application: A practical application is a useful, concrete, and tangible result. In the present application, the invention of claims 32-37 does not produce a useful, concrete, and tangible result. The method of developing a model, as recited in the preamble is not set forth in the body of the claim. The body of the claim recites collecting data, analyzing the data, establishing features of the relationship, creating a model integrating the features, and developing a baseline by inputting exemplary data. Arguably, the claim may be broadly interpreted to include developing a model insofar as the step of creating a model is recited. However, the step of developing a baseline value is also included, thus it is unclear what the result of the process is and how the result is useful, concrete, and tangible. If the model and baseline value are the useful result, i.e., for assessing a target relationship, then the result is not concrete and tangible, i.e., the result cannot be duplicated by one of ordinary skill without undue experimentation and the result is merely data, numbers, values, dynamic components, and labels assigned to the relationship and exemplary data rather than a result.

Technological Arts: The claimed invention must be within the technological arts. Mere ideas in the abstract that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" and therefore are found to be nonstatutory subject matter. The process claim must somehow apply, involve, use, or advance the technological arts. In the present application, the invention of claims 32-37 is devoid of any technology. The recited steps do not apply, involve, use, or advance the technological arts, but rather are an abstract idea that can be performed in the mind of one performing the method, or by use of pencil and paper. The steps constitute an abstract idea of how to develop a model, rather than actually performing the method of developing a model by applying, involving, using, or advancing the technological arts.

In conclusion, claims 32-37 do not produce a useful, concrete, and tangible result and do not apply, involve, use, or advance technology, thus they are directed to nonstatutory subject matter.

Claims 38-41

Practical Application: A practical application is a useful, concrete, and tangible result. In the present application, the invention of claims 38-41 does not produce a useful, concrete, and tangible result. The method of developing a model, as recited in the preamble is not set forth in the body of the claim. The body of the claim recites collecting data, analyzing the data, establishing features of the relationship, creating a model integrating the features, and developing a baseline by inputting exemplary data. Arguably, the claim may be broadly interpreted to include developing a model insofar as the step of creating a model is recited. However, it is unclear how the claimed result is useful, concrete, and tangible.

Technological Arts: The claimed invention must be within the technological arts. Mere ideas in the abstract that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" and therefore are found to be nonstatutory subject matter. The process claim must somehow apply, involve, use, or advance the technological arts. In the present application, the invention of claims 38-41 is devoid of any technology. The recited steps do not apply, involve, use, or advance the technological arts, but rather are an abstract idea that can be performed in the mind of one performing the method, or by use of pencil and paper. The steps constitute an abstract idea of how to develop a model, rather than actually performing the method of developing a model by applying, involving, using, or advancing the technological arts.

In conclusion, claims 38-41 do not produce a useful, concrete, and tangible result and do not apply, involve, use, or advance technology, thus they are directed to nonstatutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-16 and 32-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-16, the recitation of "corresponding to a condition" of the collaborative relationship is confusing. While the output value may correspond to a condition, it is unclear from the claim how the condition relates to the components of the model. The method of modeling comprises determining an output value corresponding to a condition. The determining step is unclear as evidenced by claim 15, which includes the determining a condition "by comparing the output value to a baseline value." First, "a condition recited at claim 15 must be related to or distinguished from "a condition" recited in claim 1. Second, it is unclear how the method can include determining an output value based on a condition when the condition is determined by comparing the output value to something else. Claim 1 has been interpreted broadly as determining an output value.

Further, claim 4 recites the limitation "said time" at the first line. There is insufficient antecedent basis for this limitation in the claim.

Claims 32-37 are indefinite because the steps recited in the claim are not interrelated to each other and do not clearly set forth how the steps are performed in order to develop a model. For example, the step of analyzing the data and establishing significant features of the relationship is not clear what is meant by significant. The step of creating a model having components integrating the features is also indefinite insofar as the claim abstractly presents the idea of components without actually manipulating the features. The features, as claimed, seem to be attributes of the data (i.e., ideas about the data) so it is unclear how the creating step can be performed bases on the abstract representation of the previous steps. Also, the step of creating a model wherein the model is dynamic is problematic, if a model is created, how can it be dynamic (presumably meant to mean changing)? A further manipulation or step would be required in order to render the model dynamic. This limitation has been given no patentable weight insofar as the claimed steps do not support a dynamic model. Lastly, the step of developing a baseline value by inputting exemplary data is a step of collecting data nothing more.

Regarding claims 32-37, the method of developing a model, as recited in the preamble is not set forth in the body of the claim. The body of the claim recites collecting data, analyzing the data, establishing features of the relationship, creating a model integrating the features, and developing a baseline by inputting exemplary data. Arguably, the claim may be broadly interpreted to include developing a model insofar as the step of creating a model is recited. However, it is unclear how the steps of collecting data, analyzing data and establishing significant features, and, creating a model, are related to each other and to the evolutionary stage recited later in the claim. In order to determine the metes and bounds of patent protection desired the claim must be clear in scope.

Regarding claim 34, it is unclear what is being modified as to the baseline value. The baseline value, as recited in claim 32, is developed by inputting exemplary data into the model, yet claim 34 updates the baseline value by inputting new data related to one or more of said components. The inputting step of claim 34 should be related to the developing step of claim 32, i.e., clarification of whether the developing step is being modified or whether the inputting step is in addition to the steps previously recited. Also, is the new data a type of exemplary data or some other type of data, if the data is another type of data how is the evolutionary stage of the baseline value related to the one or more components.

Regarding claim 35, line 1, the phrase "wherein the model is dynamic" repeats that which is recited in the creating step of claim 32.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5, 9, 12-21, 25, and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Clancey (cited by applicant, US-6216098).

Regarding claim 1, Clancey discloses a method of modeling a collaborative relationship comprising:

providing a model (storing a model having model elements, C.4, L.44 – C.5, L.13; the model includes elements that represent components broadly related to the levels of work and communication, quality of interaction, and social connectivity, C.2, L.35 – C.4, L.43, C.33, L.60-67) comprising components including: joint work level, communication level, interaction quality, and social connectivity, wherein the model tracks interrelationship between components;

inputting data corresponding to model components (this step is inherent in that the model contains data, so data must have been input);

determining output corresponding to a condition by analyzing the data (comparator process including an explanatory mode, C.5, L.14-61).

Regarding claim 2-3, Clancey discloses a method wherein the model tracks each component over time (C.37, L.29-30).

Regarding claim 4, a collaborative relationship, such as that disclosed in Clancey, inherently has a life cycle, whereby the relationship begins when the collaboration starts and ends when the collaboration is over.

Regarding claim 5, Clancey discloses a method wherein the data includes a time identifier insofar as the information is tracked through space and time (C.37, L.4-15).

Regarding claim 9, Clancey discloses a method wherein the connectivity comprises a first subgroup and a second subgroup (C.37, L.29-34).

Regarding claims 12-13, Clancey discloses a method wherein at least one component is dynamic (through utilization of the Brahms model, for example, C.6, L.4 – C.7, L.15); and, the Clancey system dynamics include stocks (inputs), converters (comparator processor), and flows (outputs).

Regarding claim 14, Clancey discloses method, which meets the limitations of claim 14, insofar as the weighted value of each component is equal.

Regarding claim 15, Clancey discloses the step of determining the condition of the relationship (comparator process explanatory mode to compare predictions of the model with actions of the user C.5, L.14-61).

Regarding claim 16, Clancey discloses the step of validating the model by comparing the model to an exemplary value, as broadly recited (comparator process explanatory mode to compare predictions of the model with actions of the user C.5, L.14-61).

Regarding claims 17 and 18, Clancey discloses a method of modeling a collaborative relationship comprising:

> providing a model (storing a model having model elements, C.4, L.44 – C.5, L.13; the model includes elements that represent components broadly related to the levels of work and communication, quality of interaction, and social connectivity, C.2, L.35 – C.4, L.43, C.33, L.60-67) comprising components including: joint work level, communication level, interaction quality, and social connectivity, wherein the model tracks interrelationship between components and each component over time (C.37, L.29-30);
>
> inputting data corresponding to model components (this step is inherent in that the model contains data, so data must have been input);
>
> determining output corresponding to a condition by analyzing the data (comparator process including an explanatory mode, C.5, L.14-61);

determining a condition of the relationship by comparing the output value to a baseline value of the model (comparator process explanatory mode to compare predictions of the model with actions of the user C.5, L.14-61).

Regarding claim 19, a collaborative relationship, such as that disclosed in Clancey, inherently has a life cycle, whereby the relationship begins when the collaboration starts and ends when the collaboration is over.

Regarding claim 20, Clancey discloses a method wherein the data includes a time identifier insofar as the information is tracked through space and time (C.37, L.4-15).

Regarding claim 21, it is inherent that the Clancey model baseline corresponds to a lifecycle stage insofar as the model includes information about the relationship over time. Thus, the beginning and end of the model would represent or correspond to a stage of the relationship lifecycle.

Regarding claim 25, Clancey discloses a method wherein the connectivity comprises a first subgroup and a second subgroup (C.37, L.29-34).

Regarding claim 28-29, Clancey discloses a method wherein at least one component is dynamic (through utilization of the Brahms model, for example, C.6, L.4 – C.7, L.15); and, the Clancey system dynamics include stocks (inputs), converters (comparator processor), and flows (outputs).

Regarding claim 30, Clancey discloses method, which meets the limitations of claim 14, insofar as the weighted value of each component is equal.

Regarding claim 31, Clancey discloses the step of validating the model by comparing the model to an exemplary value, as broadly recited (comparator process explanatory mode to compare predictions of the model with actions of the user C.5, L.14-61).

9. Claims 32-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Pak (US-6581037).

Regarding claims 32 and 36, Pak discloses a method of developing a model for a relationship between entities (individuals, groups, and societies as noted in the abstract) comprising:

> collecting data (each individual interprets the behavior of other individuals or groups, C.3, L.25-43; questionnaire, C.8, L.30 – C.9, L.57; data is collected by questionnaire, for example, C.9, L.49-57);
>
> analyzing data and establishing features (behavioral reference indicia and interpretation indicia, C.3, L.35 – C.4, L.48, Fig.3);
>
> creating a model having components, wherein the model is dynamic (an unlimited range of behaviors can be described or analyzed, C.9, L.49-57); and,
>
> developing a baseline value indicative of exemplary relationship corresponding to an evolutionary stage (database C.9, L.59 – C.10, L.14).

Regarding claim 33, Pak discloses a target relationship using the model data as a predictor (Fig.6-7, C.10, L.32 – C.11, L.14).

Regarding claim 34, Pak discloses inputting new data related to the components (information from the questionnaire is used to form a database, C.9, L.59).

Regarding claim 35, Pak discloses a dynamic model, the components of which are a function of time, as broadly recited, insofar as the model changes as information is loaded from the questionnaires.

Regarding claim 37, Pak discloses analysis that is sociometric insofar as the questionnaire is used to gather data and predict behavior response of individuals or groups.

Regarding claim 38, Pak discloses a method of developing a model for a relationship between entities (individuals, groups, and societies as noted in the abstract) comprising:

> collecting data (each individual interprets the behavior of other individuals or groups, C.3, L.25-43; questionnaire, C.8, L.30 – C.9, L.57; data is collected by questionnaire, for example, C.9, L.49-57; the questionnaire contains both qualitative and quantitative data (the questionnaires are developed based on the particular behavior that is intended to be analyzed and the respondents provide an interpretation value, C.9, L.1-48; and the information provided by the respondents is subject, C.9, L.36-48);
>
> analyzing data and establishing features (behavioral reference indicia and interpretation indicia, C.3, L.35 – C.4, L.48, Fig.3);
>
> creating a model having components, wherein the model is dynamic (an unlimited range of behaviors can be described or analyzed, C.9, L.49-57); and,
>
> developing a baseline value indicative of exemplary relationship corresponding to an evolutionary stage (database C.9, L.59 – C.10, L.14).

Regarding claim 39, Pak discloses generating a quantitative target relationship insofar as the intent of the method is to predict the outcome of a future relationship based on culture and the method includes comparison of one culture with another (C.4, L.1-22).

Regarding claim 40, Pak discloses that the information is analyzed qualitatively by applying inductive analysis (measurement of emotional arousal with perceived interactive relationship, C.9, L.38-48)

Regarding claim 41, Pak discloses that the information is analyzed quantitatively by applying statistical analysis to numerical scale responses (C.9, L.36-37).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Lipner (US-5319579) teaches simulation of human performance when operating equipment.
- Otani (JP-07334070 A) teaches simulation of a process that is dynamic and temporal.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamara L. Graysay whose telephone number is (703) 305-1918. The examiner can normally be reached on Mon - Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached on (703) 305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamara L. Graysay
Examiner
Art Unit 3623

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